

WHAT IS CLAIMED IS

1. Vaporizer for vaporizing a liquid source, the vaporizer comprising:

a liquid source supplying part 10 for supplying a liquid source;

5 a vaporizing part 30 for vaporizing the liquid source; and

an O-ring 17 positioned on a place in which the liquid source supplying part 10 and the vaporizing part 30 are in contact with each other so as to minimize a thermal contact area for the liquid source supplying part 10 and the vaporizing part 30.

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2. Vaporizer for vaporizing a liquid source, the vaporizer comprising:

a liquid source supplying part 10;

a vaporizing part 30;

a recess 16;

15 a O-ring 17;

said liquid source supplying part including a source intaking passage 11 for receiving a liquid source, an intaking tube 12 communicated with the source intaking passage 11 and having a fine hole 12a formed thereon, a stopper 13 formed on a place at which the source intaking passage 11 and the intaking tube 12 are joined together, an adjusting pin 14 for controlling supplying of the liquid source from the source intaking passage 11 to the intaking tube 12, and a diaphragm 15 integral with the adjusting pin 14;

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said vaporizing part 30 including a first heater 31 attached to a body of the

vaporizing part 30 to heat the vaporizing part, a vaporizing chamber 35 for vaporizing the liquid source, a gas transporting passage 37 for supplying a transporting gas, and a discharging port 38 for communicating with the vaporizing chamber 35 and for discharging the transporting gas and the vaporized liquid source to the outside of the vaporizing chamber 35, and

said recess 16 being formed on selected one of the liquid source supplying part 10 and the vaporizing part 30 to minimize a thermal contact area therebetween, and coupled with the O-ring 17.

3. The vaporizer as claimed in claim 2, wherein the lower surface of the diaphragm 15 is formed as a part of a supplying line for the liquid source formed by the source intaking passage 11.

4. The vaporizer as claimed in claim 2, wherein the lower surface of the diaphragm 15 is separated from the supplying line for the liquid source formed by the source intaking passage 11.

5. The vaporizer as claimed in claim 2, further comprising an actuator adjacent to the upper side of the adjusting pin 14, wherein the adjusting pin 14 is operated by the actuator.

6. The vaporizer as claimed in claim 2, wherein the vaporizing part 30

further comprises a second heater 32, the second heater being formed to protrude into the vaporizing chamber 35.

7. The vaporizer as claimed in claim 1, wherein one end of the adjusting pin
5 14 is inclined and the stopper 13 has an corresponding inclined part, and the inclined angle of the adjusting pin is smaller than that of the stopper.

8. The vaporizer as claimed in claim 2, wherein the gas transporting part 37
10 is communicated with the gap 36 formed between the upper inner circumference of the vaporizing chamber 35 and the intaking tube 12 of the liquid source supplying part 10.

9. The vaporizer as claimed in claim 6, wherein the first and the second
15 heaters 31 and 32 include a temperature sensor 33 capable of sensing a temperature of the region in real time between the first heater 31 and the second heater 32.

10. The vaporizer as claimed in claim 6, the first heater 31 and the second
20 heater 32 are unified to form a heater block 57 mounted on the lower end of the heater block 57.

11. The vaporizer as claimed in claim 2, wherein the liquid source supplying

part 10 further includes a cooling device 18 in order to cool heat transferred from the vaporizing chamber 30.

12. The vaporizer as claimed in claim 5, the actuator 50 is any one selected
5 from a manual actuator or a Piezo actuator.

13. The vaporizer as claimed in claim 2, wherein the gas transporting passage 37 is inclined to increase a thermal contact area in order for the transporting gas to absorb a heat from the vaporizing chamber 30 enough.